11. Roy

Program Name: Roy.java **Input File: roy.dat**

Roy is playing a new card game. This game is a card game where the goal is to get as many duplicates in your hand as possible. There are 104, two normal decks of cards in this game labelled A, K, Q, J, 10, 9, 8, 7, 6, 5, 4, 3, 2. This game starts by dealing each player 5 cards. Then each player is dealt a card and the player has to choose a card to remove from their hand such that they always have only 5 cards in their hand at a time. Roy has decided to apply a simple algorithm to his card keeping choices. When Roy gets a card he removes the card in his hand that has the least number of occurrences. If there are two different valued cards that have the same number of occurrences then the one of lower value is eliminated. Value for the cards is 2 < 3 < 4 < 5 < 6 < 7 < 8 < 9 < 10 < J < Q < K < A.

Example: For input A A Q K 10 A K K, the hand starts with 5 cards A A Q K 10, the next card that Roy receives is A. Q, K, and 10 all have equal number of occurrences so 10 is removed. The next card is received K. Q has the least number of occurrences and is removed. The next card that is received is K. Since A and K have the same number of occurrences, K is removed because it is less in value. The final hand is K K A A A.

Input: A string of characters representing the cards that Roy has received. The first 5 characters are the cards that Roy is dealt, all the following cards are received applying his algorithm.

Assumptions: The input string will have at least 5 characters.

Output: The final hand, arranged in sequential order from lowest to highest rank.

Example Input:

```
A A Q K 10 A K K
K Q J A A A 10 J
K K Q K J J 10 A 2 2
K K K K Q Q Q Q A
```

Example Output:

```
K K A A A
Q K A A A
J J K K K
K K K K A
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